



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,273	10/22/2003	Balaji S. Thenthiruperai	2382	4931
28005	7590	11/27/2007	EXAMINER	
SPRINT			JEAN, FRANTZ B	
6391 SPRINT PARKWAY			ART UNIT	PAPER NUMBER
KSOPHT0101-Z2100			2154	
OVERLAND PARK, KS 66251-2100				
MAIL DATE		DELIVERY MODE		
11/27/2007		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

MN

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/691,273	THENTHIRUPERAI, BALAJI S.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Frantz B. Jean	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 12 September 2007.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-25 and 27 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-25 and 27 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____.   | 6) <input type="checkbox"/> Other: _____                          |

This office action is in response to applicant's remarks filed on 09/12/07. Claims 1-25 and 27 are still pending in this application.

***Claim Rejections - 35 USC § 112***

Claim 1 recites the limitation "the second entity". There is insufficient antecedent basis for this limitation in the claim. Furthermore, there was no prior recitation of first entity in the claim. Correction is requested.

**Amendment:** Applicant has amended the claims but failed to provide support for the amendment. Upon responding to this office action, Applicant is requested to provide support in the specification for the amended claims.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4-5, 8-17 and 24-25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohn et al. ("Cohn") US publication Number 2002/0065074 in view of Grob et al. hereinafter Grob US patent number 6,894,994 B1.

As per claim 1, Cohn teaches a method of streaming multimedia content in a wireless communication system (PDA or cellular phone) comprising:

Receiving, in a server a data network, a request from a mobile device to stream multimedia content to the mobile device from the server, the request being transmitted over a wireless connection and via network entity to the server (see fig 1; par 0012, 0022 and 0026); streaming a portion of the requested multimedia content from the server to the mobile device via the network entity and the wireless connection (fig 1; par 0026); the network entity detecting a termination of the wireless connection during the streaming; and the second entity responsively notifying the server (par 0013; retaining information, the information indicating a point in the multimedia content stream where the termination of the wireless connection occurred; re-establishing the wireless connection; and resuming streaming of the multimedia content based on the retained information (par 0054, 0082, 0103, 0117-0121) and claims 1, 4, and 5).

However, Cohn fails to teach BSC and PDSN. Grob discloses all these features (see Grob fig 6-8; col. 10 line 41 to col. 11 line 50; col. 21 line 10 to col. 22 line 28; in addition Grob teaches the steps of notifying that is part of BSC and PDSN communication scheme as shown in fig 6-8). It would be obvious to one of ordinary skill in the art at the time of the invention to combine Grob's features with Cohns' system to increase data transmission in Cohn's at any particular moment. One skill artisan at the time of the invention would be motivated to do so to improve and facilitate high data rate, data traffic and wireless packet data communication in the system (see Grob col. 2 lines 2-9).

As per claims 4-5, Cohn teaches retaining an identifier of a mobile device that comprises a point-to-point protocol link identifier, a network address identifier and an Internet protocol address (see par 0041).

As per claims 11-12 and 24-25, Cohn teaches communicating the retained information from the multimedia gateway to an application/content server (see fig 1, abstract and paragraph 0013); resuming streaming of the multimedia content from the server to the mobile device (par 0054, 0082, 0103, 0117-0121) and claims 1, 4, and 5), via a multicast router at one of:

The point in the multimedia content stream where the termination of the wireless connection was detected; and a predetermined time period earlier in the multimedia content stream than the point where the termination was detected (par 0054, 0082, 0103, 0117-0121) and claims 1, 4, and 5).

As per claim 13, Cohn teaches communicating the information from the server to a first multimedia gateway; and storing the information in a database operatively associated with the first multimedia gateway (fig 1, abstract, and par 0013).

As per claim 14, Cohn teaches communicating the stored information from the first multimedia gateway to the server; responsively sending logic resuming streaming of the multimedia content from the server to one of the fist multimedia gateway and a second multimedia gateway (par 0054, 0082, 0103, 0117-0121) and claims 1, 4, and 5); and executing the logic with one of the first multimedia gateway and a second multimedia gateway to resume the multimedia content stream (par 0054, 0082, 0103, 0117-0121) and claims 1, 4, and 5).

As per claim 15, Cohn teaches resuming occurs automatically in response to reestablishing the wireless connection (par 0054, 0082, 0103, 0117-0121) and claims 1, 4, and 5).

As per claim 16, Cohn teaches responsively to reestablishing the wireless connection, providing a user with an option to resume streaming of the multimedia content or cancel streaming of the multimedia content; and resuming streaming of the multimedia content in response to a user indication to resume streaming (par 0054, 0082, 0103, 0117-0121) and claims 1, 4, and 5).

As per claims 17 and 26, Cohn teaches a method for streaming multimedia content in a wireless communication system comprising: receiving, via a packet network, a streaming protocol command from a mobile device, the command operating as a request that the multimedia content be streamed to the mobile device from an application/content server coupled with the network (see par 0012 and 0026); streaming at least a portion of the requested multimedia content from the server to the mobile device via a multimedia gateway (0026); detecting a termination of the wireless connection during streaming; retaining information in one of the multimedia gateway and the application/content server, the information indicating a point in the multimedia content where the termination of the wireless connection occurred; re-establishing the wireless connection; and resuming streaming of the multimedia content based on the retained information (par 0054, 0082, 0103, 0117-0121) and claims 1, 4, and 5). Cohn also teaches sending the retained information to an entity in the network (see fig 1).

Cohn fails to teach BSC and PDSN. Grob discloses all these features (see Grob fig 6-8; col. 10 line 41 to col. 11 line 50; col. 21 line 10 to col. 22 line 28; in addition Grob teaches the steps of notifying that is part of BSC and PDSN communication scheme as shown in fig 6-8). It would be obvious to one of ordinary skill in the art at the time of the invention to combine Grob's features with Cohns' system to increase data transmission in Cohn's at any particular moment. One skill artisan at the time of the invention would be motivated to do so to improve and facilitate high data rate, data traffic and wireless packet data communication in the system (see Grob col. 2 lines 2-9).

Claims 8-10 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohn in view of Grob et al. hereinafter ("Grob") US patent Number 6,894,994 B1.

As per claims 8-10, Cohn teaches communicating the multimedia content from the server to a multimedia gateway via a multicast router (see fig 1, abstract and paragraph 0013). However, Cohn fails to teach communicating the multimedia content from the multimedia gateway to a home agent device; communicating the multimedia content from the home agent device to a packet data serving node (PDSN); communicating the multimedia content from PDSN to a base station controller (BSC); communicating the multimedia content from the BSC to a base transceiver station (BTS); and communicating the multimedia content from the BTS to the mobile device. Furthermore, Cohn fails to teach determining, at a base station controller, that a number of bad communication frames received from the mobile device is greater than a threshold level; wherein the BSC responds to the determining by notifying one of the

multimedia gateway and an application/content server that termination of the wireless connection has occurred; furthermore, Cohn fails to teach determining, at a base station controller, that the wireless connection cannot be handed off from a first (BTS) to a second (BTS); wherein the BSC responds to the determining by notifying the server that termination of the wireless connection has occurred. Grob discloses all these features (see Grob fig 6-8; col. 10 line 41 to col. 11 line 50; col. 21 line 10 to col. 22 line 28; the steps of notifying is part BSC and PDSN communication scheme see fig 6-8). It would be obvious to one of ordinary skill in the art at the time of the invention to combine Grob's features with Cohns' system to increase data transmission in Cohn's at any particular moment. One skill artisan at the time of the invention would be motivated to do so to improve and facilitate high data rate, data traffic and wireless packet data communication in the system (see Grob col. 2 lines 2-9).

As per claim 27, Cohn teaches a multimedia gateway included in a data network having a set of instructions stored therein, that when executed, the instructions provide for: receiving a streaming protocol command from a mobile device, the command operating as a request that the multimedia content be streamed to the mobile device from a server coupled with the network (see par 0012 and 0026); streaming at least a portion of the requested multimedia content from the application/content server to the mobile device (0026); receiving a notification that a termination of the wireless connection occurred during the streaming and communicating the notification to the server are inherent in Cohn because it precedes the steps of resumption of file

Art Unit: 2154

transmission and re-establishing connection (see par 0054 and 0082); receiving information indicating a point in the multimedia content stream where the termination of the wireless connection occurred and an identifier of the mobile device (resuming from the last successful point par 0054 and 0082); stored the received information in a database; reestablishing connection; sending the received information to the server; receiving logic from the server and executing the received logic to resume streaming based on information received (par 0054, 0082, 0103, 0117-0121) and claims 1, 4, and 5). Cohn does not teach PDSN. However, Grob discloses a PDSN see fig 5-6. It would have been obvious to one ordinary skill in the art at the time of the invention to combine Gob's PDSN feature with Cohn's system so it would provide packet data service to the access terminal. One skill artisan would be motivated to do so because PDSN would facilitate network access point such as PPP and IP protocols (see Gob col. 9 lines 52-65).

Claims 2-3 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohn and Grob in view of Zaima et al. ("Zaima") US patent number 7,071,942 B2.

As per claims 2 and 22, Cohn and Grob do not teach information is retained in an extensible markup language tag attribute. Zaima teaches data and information in XML tag attribute (see fig 3; col. 4 lines 13-26; col. 5 lines 30-51; col. 17 lines 21-23). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Zaima's XML to Grob and Cohn's multimedia system because XML data is versatile and user's friendly (see col. 25 line 65 to col. 26 line 3). One skill artisan at the time of the invention would be motivated to do so because tagging information in an

XML it would allow a user to be easily informed of the content of a data by reading the XML data (see Zaima col 4 lines 22-26).

As per claims 3 and 23, Cohn teaches retaining information contains a time-stamp associated with a point in the multimedia content stream where termination of the wireless connection occurred (see Cohn Para 0054). However, Cohn and Grob fail to teach SMIL. Zaima discloses a SMIL (see Zaima col. 17 lines 17-47). It must be noted that SMIL data is a markup tagging language in which an still image, a time-varying image, position of music data are written as XML subsets (see Zaima col. 17 lines 21-23). Therefore, the motivation recited in claim 2 above is applied to this claim as well.

Claims 6-7 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohn and Grob in view of Applicant's background of the invention.

As per claim 6-7 and 18, Cohn and Grob fail to recite a request and streaming in accordance to RTSP. ABI discloses this feature (see page 3 of ABI, first paragraph). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a RTSP in Grob's and Cohn's system to stream any size media clip in order to save memory space.

As per claims 19-21, Cohn teaches communicating the multimedia content from host to a multimedia gateway via a multicast router (see fig 1, abstract and paragraph 0013). Cohn fails to teach communicating the multimedia content from the multimedia gateway to a home agent device; communicating the multimedia content from the home

agent device to a packet data serving node (PDSN); communicating the multimedia content from PDSN to a base station controller (BSC); communicating the multimedia content from the BSC to a base transceiver station (BTS); and communicating the multimedia content from the BTS to the mobile device. Furthermore, Cohn fails to teach determining, at a base station controller, that a number of bad communication frames received from the mobile device is greater than a threshold level; wherein the BSC responds to the determining by notifying one of the multimedia gateway and an application/content server that termination of the wireless connection has occurred; furthermore, Cohn fails to teach determining, at a base station controller, that the wireless connection cannot be handed off from a first (BTS) to a second (BTS); wherein the BSC responds to the determining by notifying the server that termination of the wireless connection has occurred. Grob discloses all these features (see Grob fig 6-8; col. 10 line 41 to col. 11 line 50; col. 21 line 10 to col. 22 line 28; the steps of notifying is part BSC and PDSN communication scheme see fig 6-8). It would be obvious to one of ordinary skill in the art at the time of the invention to combine Grob's features with Cohns' system to increase data transmission in Cohn's at any particular moment. One skill artisan at the time of the invention would be motivated to do so to improve and facilitate high data rate, data traffic and wireless packet data communication in the system (see Grob col. 2 lines 2-9). Furthermore, Cohn and Grob fail to recite a request and streaming in accordance to RTSP. ABI discloses this feature (see page 3 of ABI, first paragraph). It would have been obvious to one of ordinary skill in the art at the time

of the invention to incorporate a RTSP in Grob and Cohn's system to stream any size media clip in order to save memory space.

### ***Response to Arguments***

Applicant's arguments filed 09/12/07 have been fully considered but they are not persuasive.

Applicant argued that Cohn does teach streaming a file to a mobile device. Examiner submits that applicant has misinterpreted the prior art of record. Cohn teaches streaming a file (see par 0026 and 0055 where content can be streamed in real time). Regarding other comments, they are moot because the rejection has been modified due to applicant's amendment of the claims (see rejection above). In summary, examiner concludes that Cohn in combination with Grob, Zaima and ABI teach all the claims of the invention as written.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frantz B. Jean whose telephone number is 571-272-3937. The examiner can normally be reached on 8:30-6:00 M-f.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



FRANTZ B. JEAN  
PRIMARY EXAMINER